

KIC 006890040

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
006890040-01	OBS	No	225.767566	323.217134	176.1	5.800	7.2	7.8	2.32	5508	3.75	7.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006890040-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

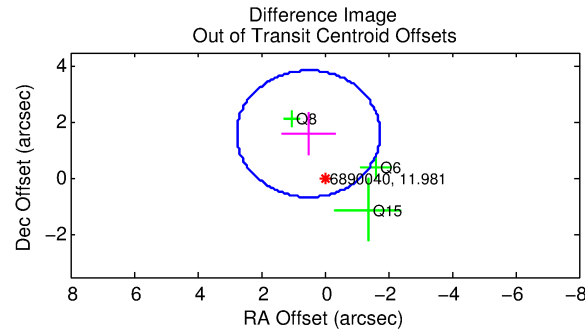
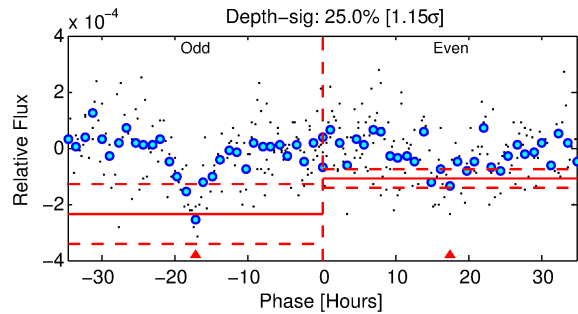
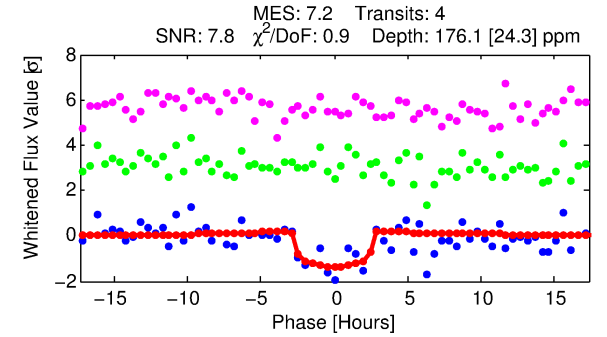
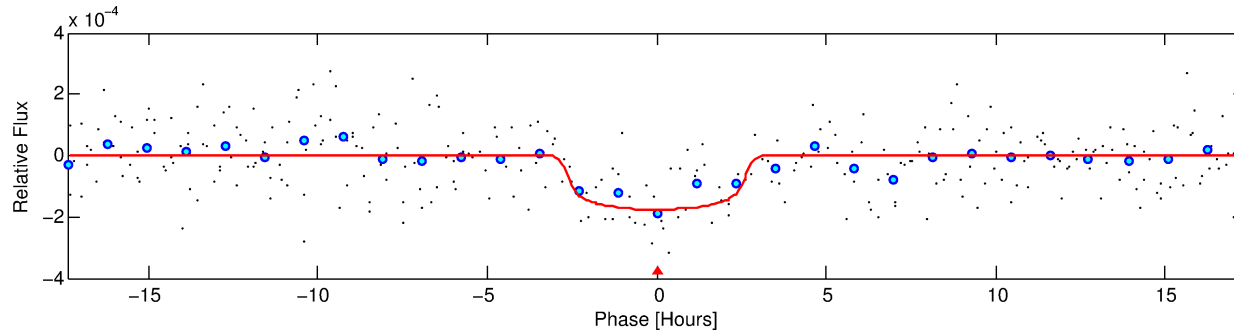
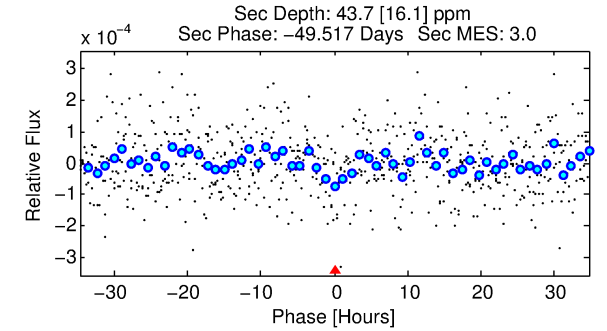
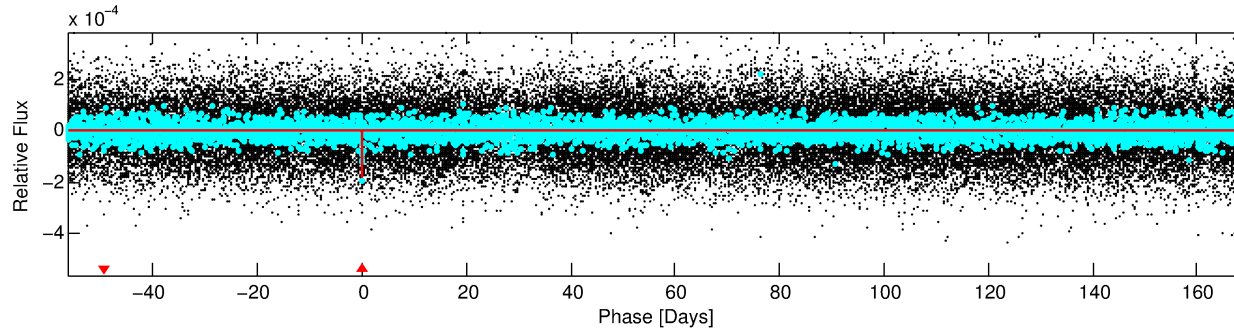
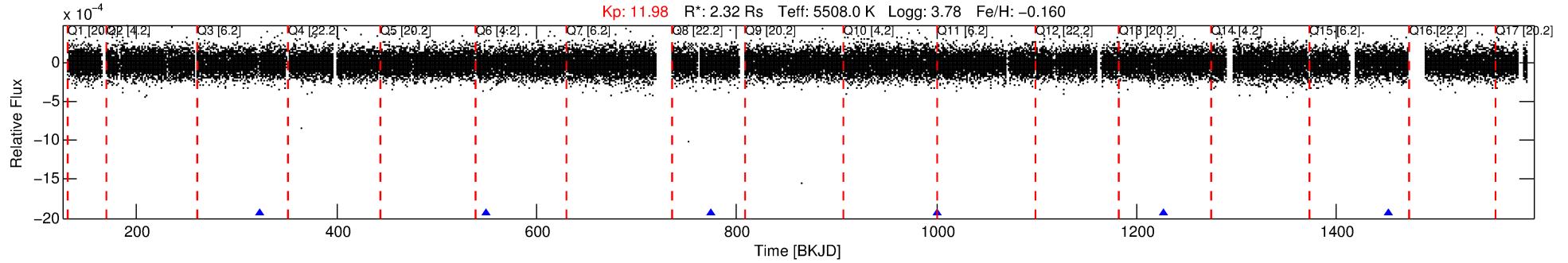
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006890040-01

No Significant Match Found

DV One-Page Summary

KIC: 6890040 Candidate: 1 of 1 Period: 225.768 d



DV Fit Results:

Period = 225.76757 [0.00461] d
Epoch = 323.2171 [0.0152] BKJD
 R_p/R^* = 0.0148 [0.0040]
 a/R^* = 129.25 [154.44]
 b = 0.92 [0.21]
 S_{eff} = 7.54 [3.62]
 T_{eq} = 423 [51] K
 R_p = 3.75 [1.58] R_e
 a = 0.7685 [0.2286] AU
 A_g = 1008.48 [803.69] [1.25σ]
 T_{eff} = 3682 [610] K [5.33σ]

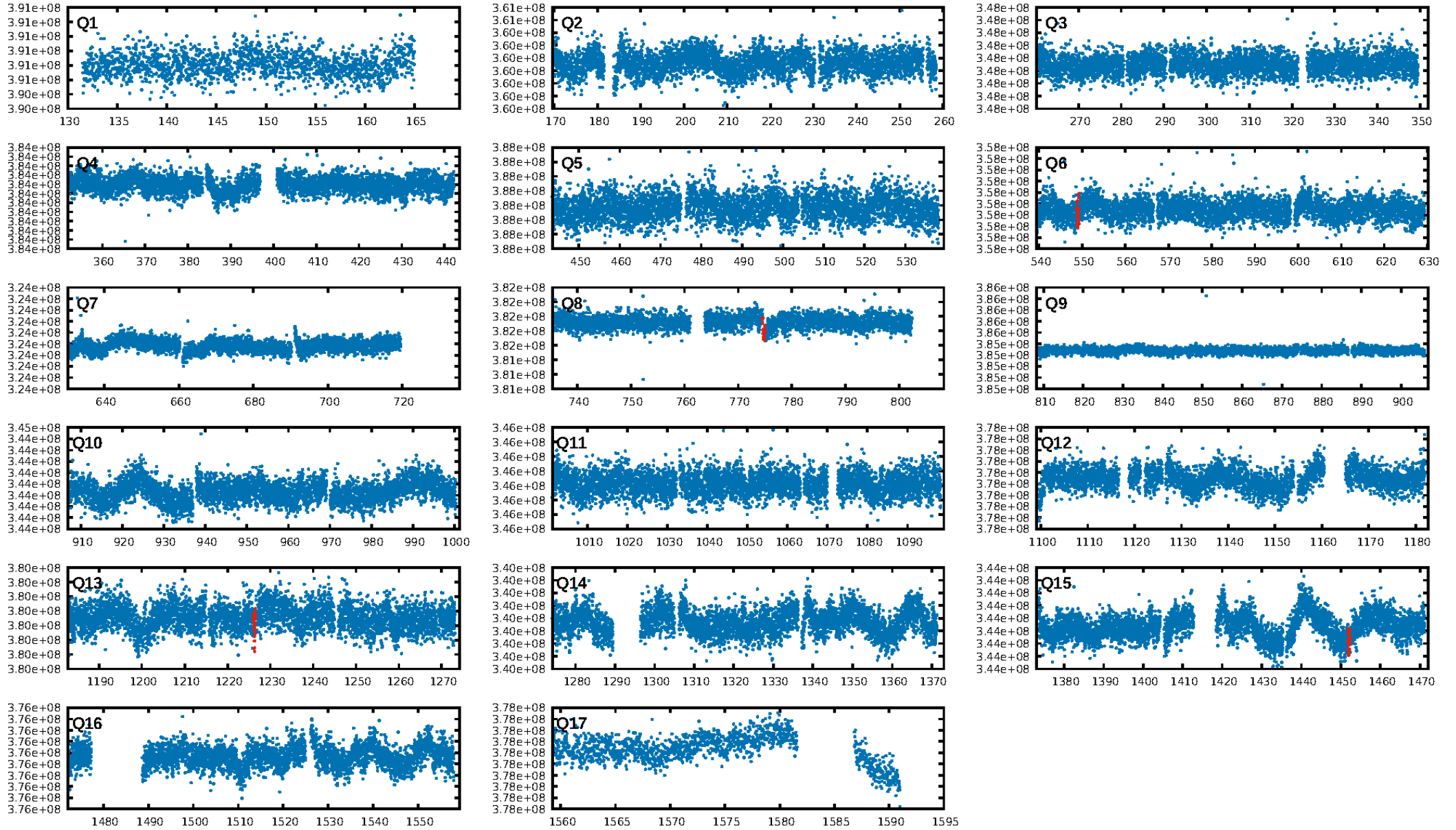
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 7.75e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.725
Centroid-sig: 2.6%
Centroid-so: 1.895 arcsec [1.71σ]
OotOffset-rm: 1.678 arcsec [2.23σ]
KicOffset-rm: 1.998 arcsec [2.12σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

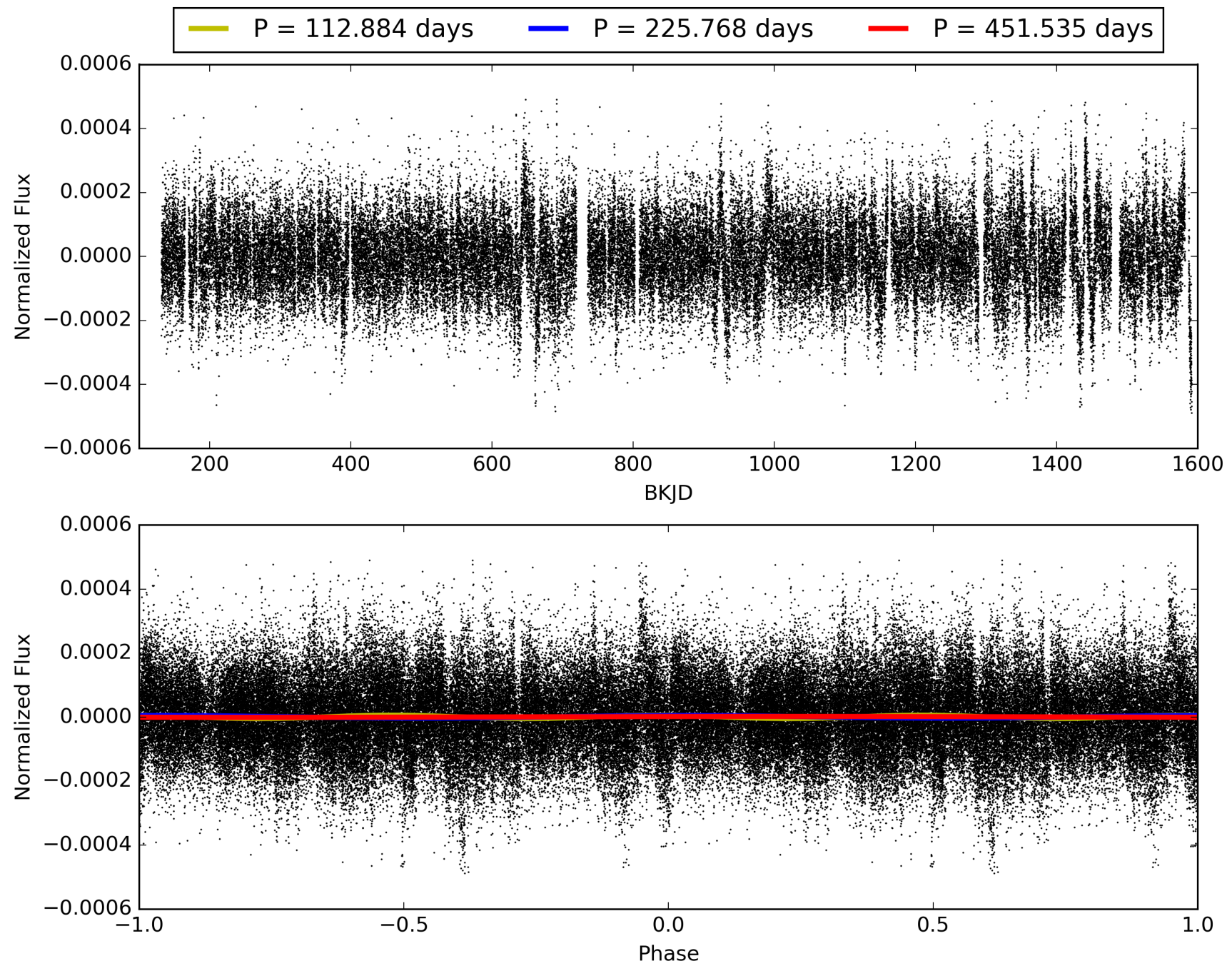
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:51:45 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006890040-01, PDC Light Curves

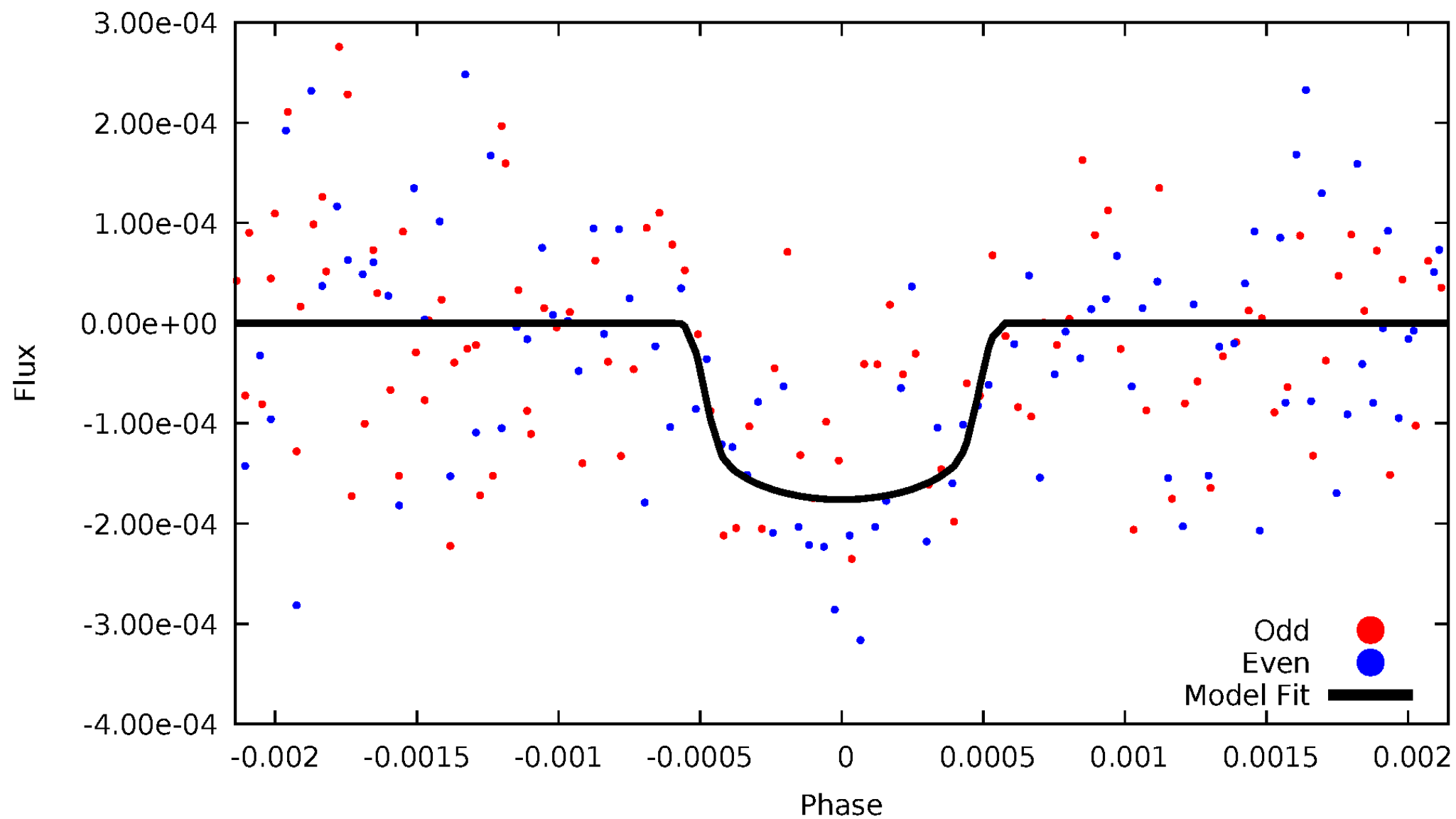


TCE 006890040-01



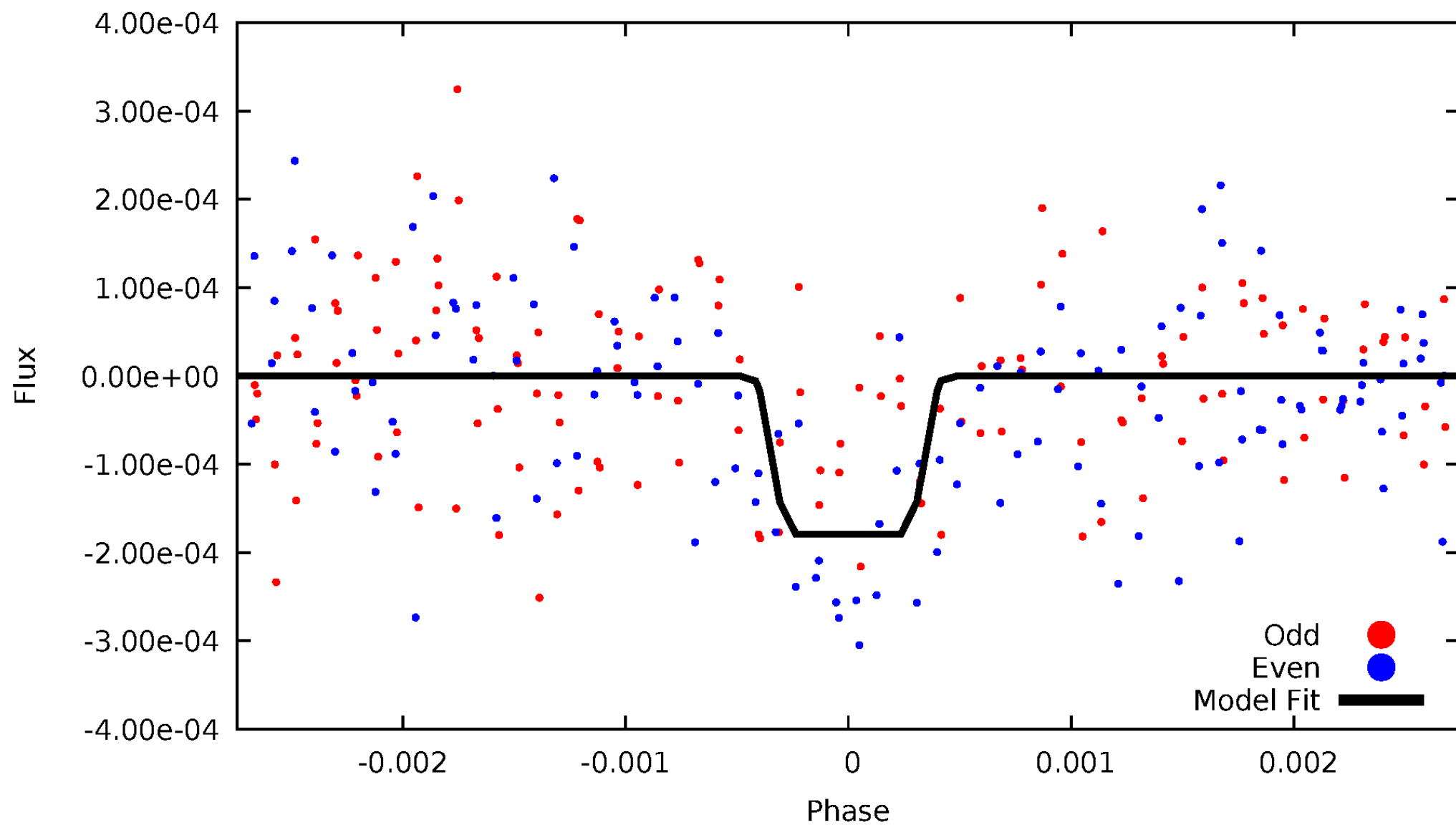
DV Odd/Even

TCE 006890040-01



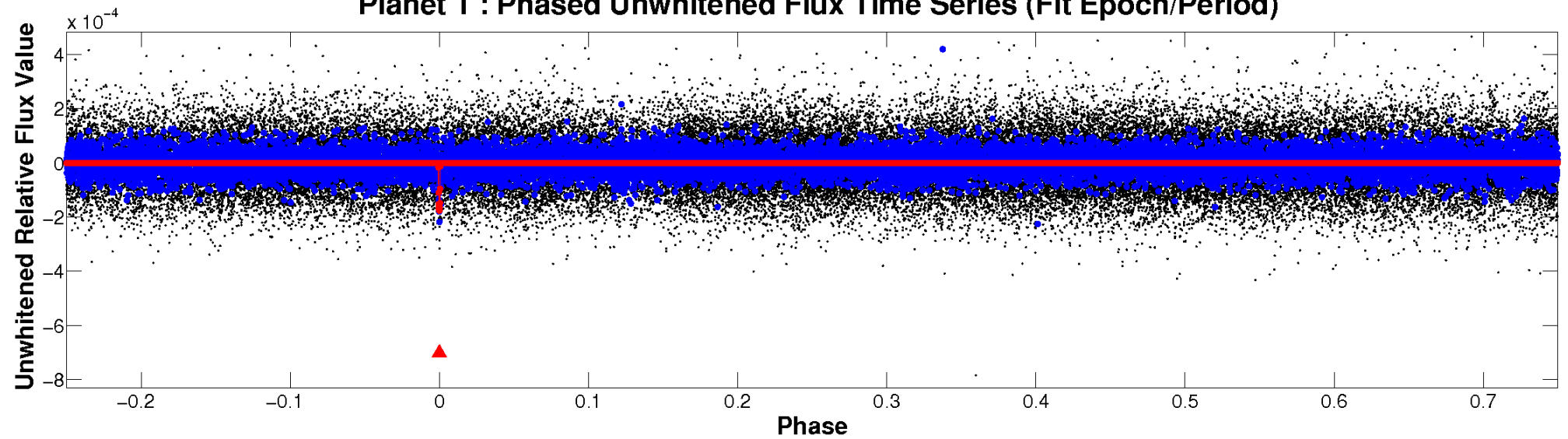
ALT Odd/Even

TCE 006890040-01

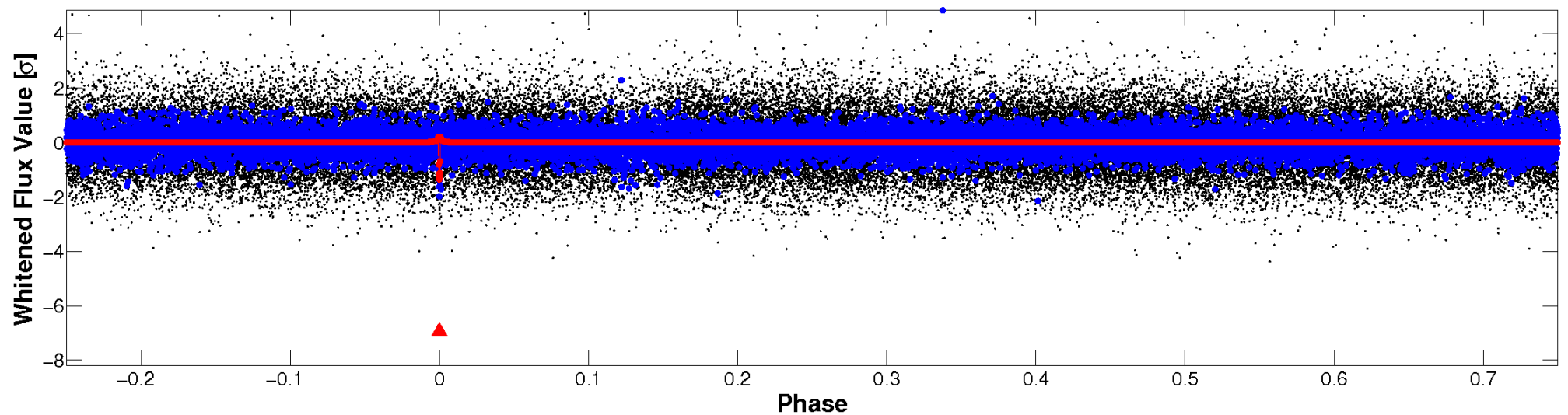


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

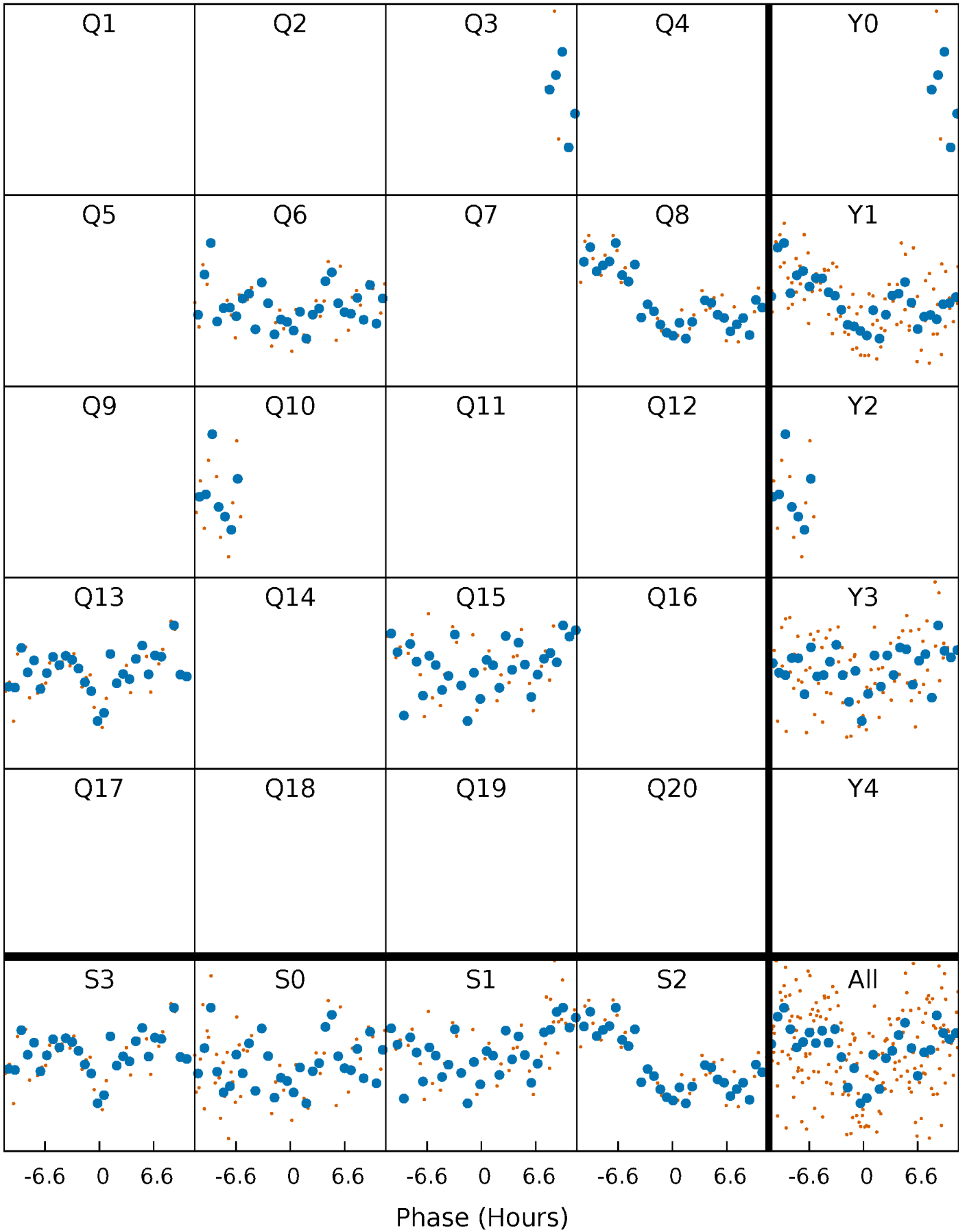


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



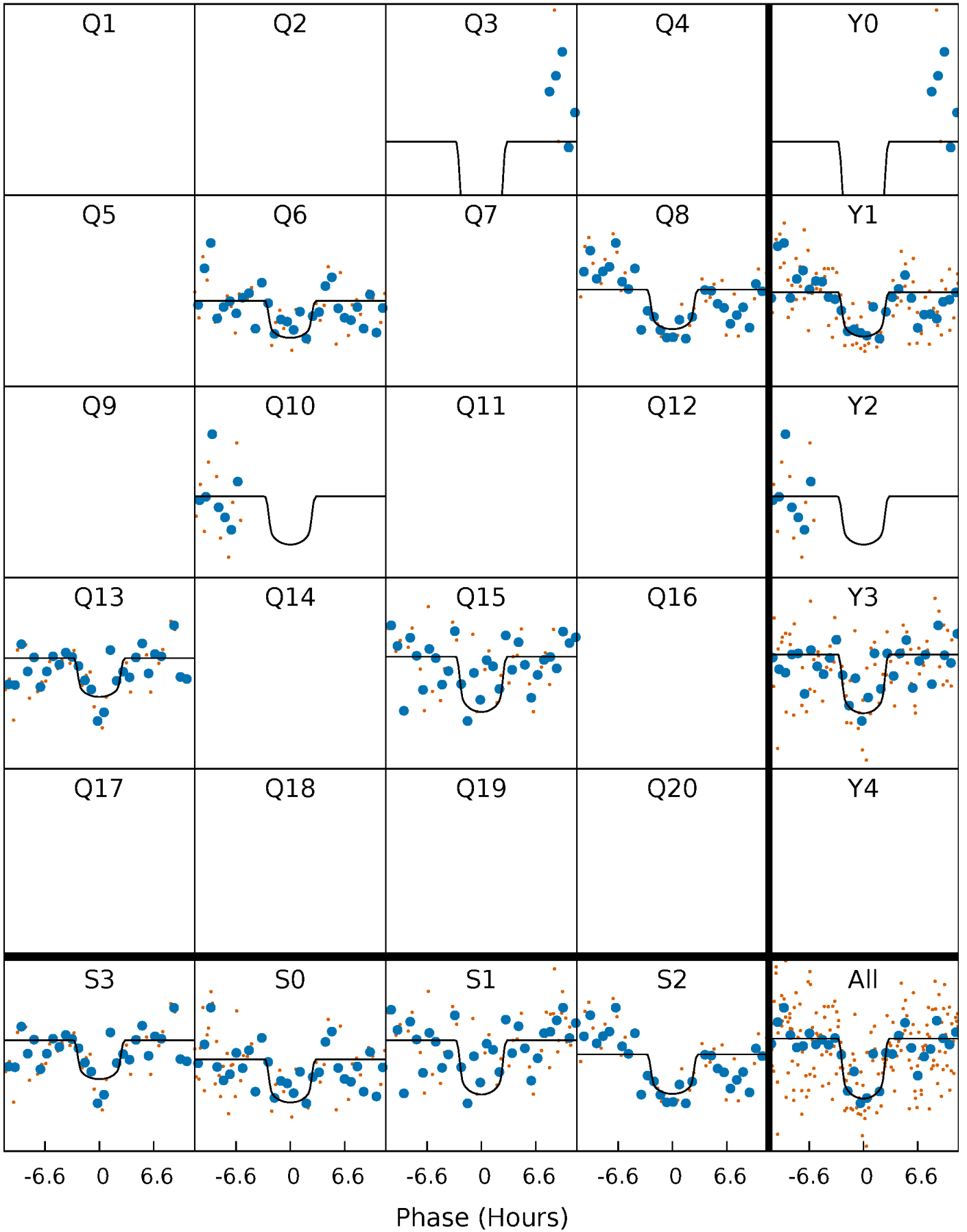
PDC Quarter-Phased Transit Curves

TCE 006890040-01 P=225.767566 Days $T_0=323.217134$ (BKJD)



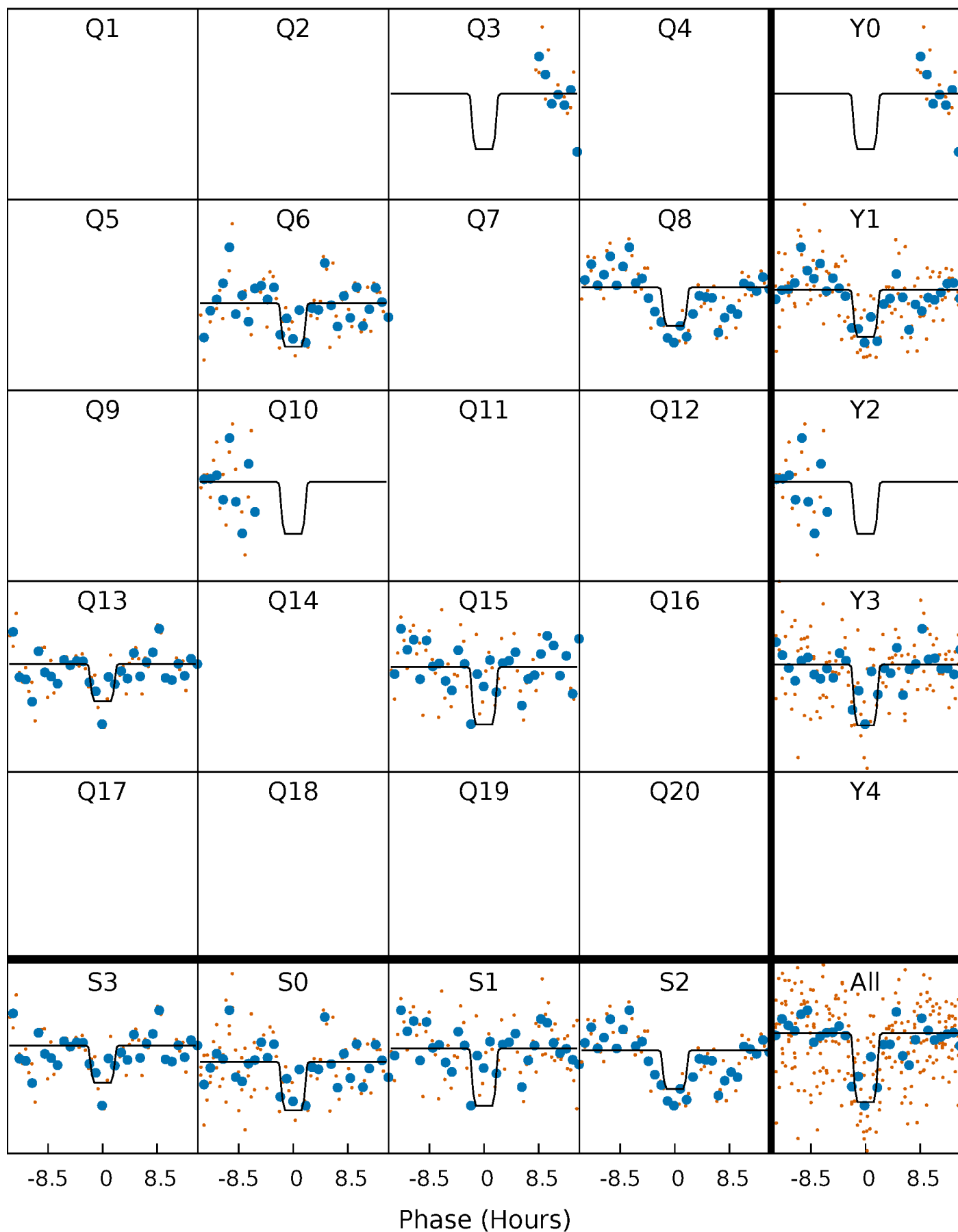
DV Quarter-Phased Transit Curves

TCE 006890040-01 P=225.767566 Days $T_0=323.217134$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

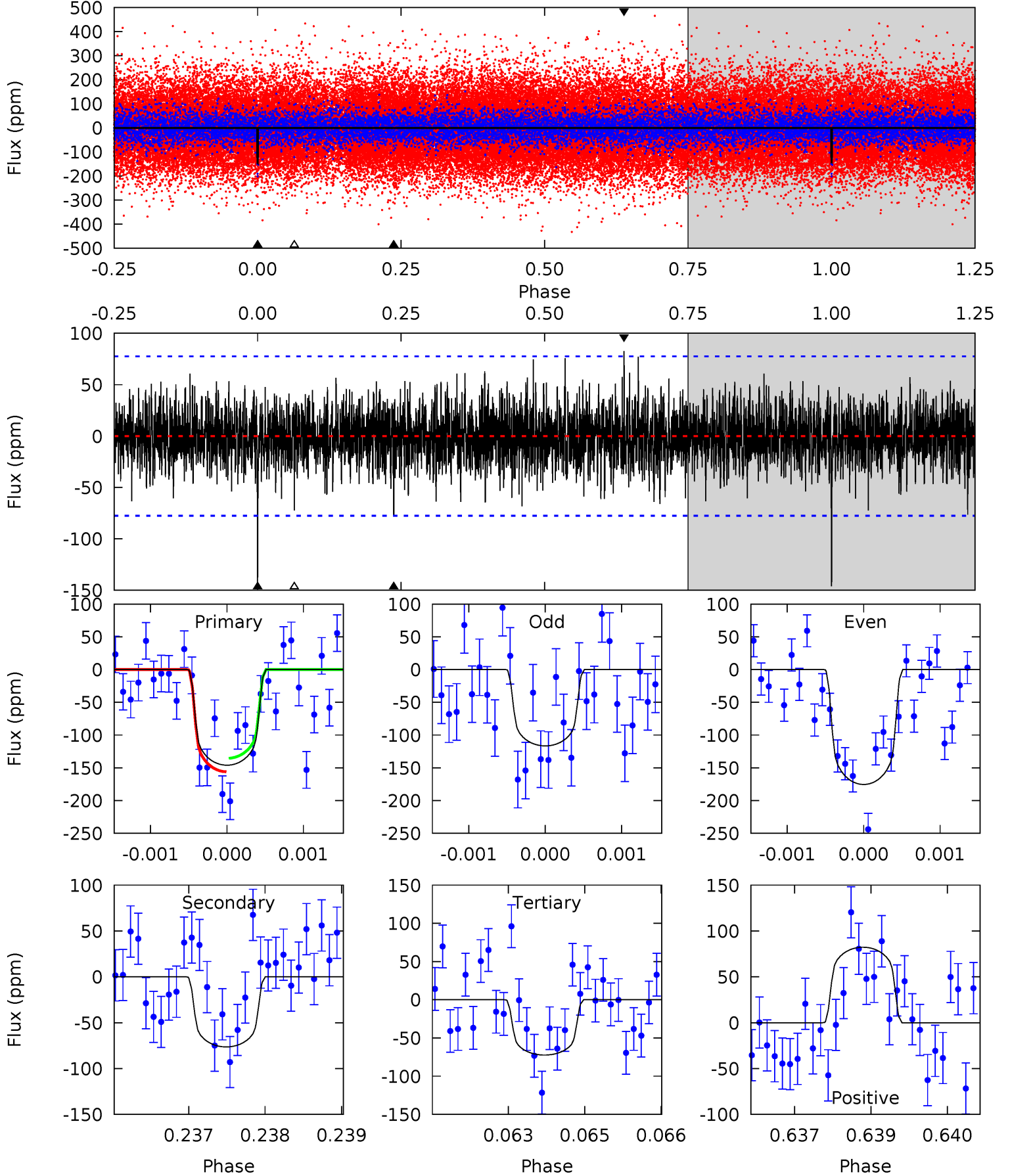
TCE 006890040-01 P=225.770404 Days $T_0=323.209720$ (BKJD)



DV Model-Shift Uniqueness Test

006890040-01, $P = 225.767566$ Days, $E = 97.449568$ Days

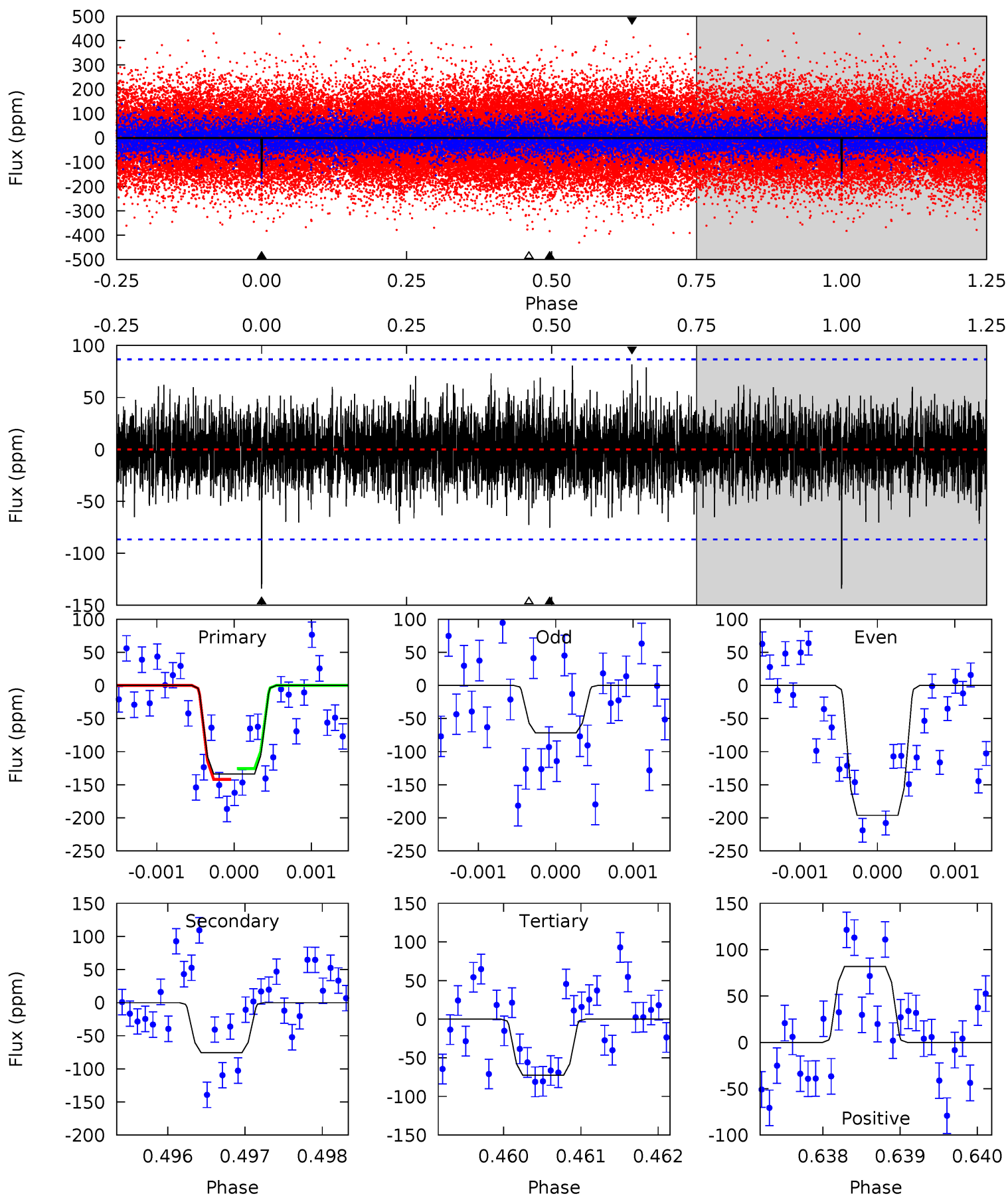
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	5.35	5.07	5.76	5.43	3.26	1.43	5.16	4.46	0.29	-0.41	2.07	1.00	0.36	0.72



Alt Model-Shift Uniqueness Test

006890040-01, P = 225.770404 Days, E = 97.439316 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.45	4.77	4.58	5.16	5.47	3.32	1.29	3.87	3.29	0.18	-0.40	3.93	1.08	0.38	0.52



Stellar Parameters For KIC 006890040

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5508^{+181}_{-165}	$3.780^{+0.266}_{-0.123}$	$-0.160^{+0.350}_{-0.250}$	$2.324^{+0.502}_{-0.754}$	$1.187^{+0.143}_{-0.245}$	$0.133^{+0.229}_{-0.056}$
	+3%/-3%	+7%/-3%	+219%/-156%	+22%/-32%	+12%/-21%	+172%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006890040-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-76 ± 14	$3.63^{+1.20}_{-1.09}$	583^{+42}_{-49}	4403^{+589}_{-451}	1903^{+2003}_{-902}
Alt.	-75 ± 16	$3.24^{+1.12}_{-1.09}$	583^{+42}_{-49}	4578^{+778}_{-467}	2307^{+2966}_{-1091}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

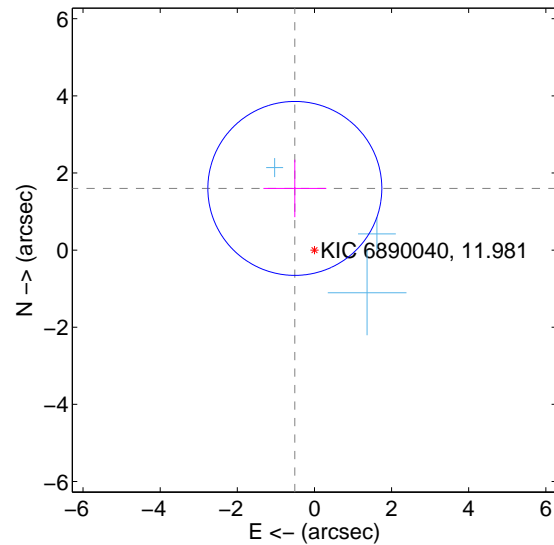
Supplemental centroid analysis for 006890040-01. **Kepler magnitude: 11.98.** Transit SNR 7.83

There are 3 quarters with good PRF difference image offsets

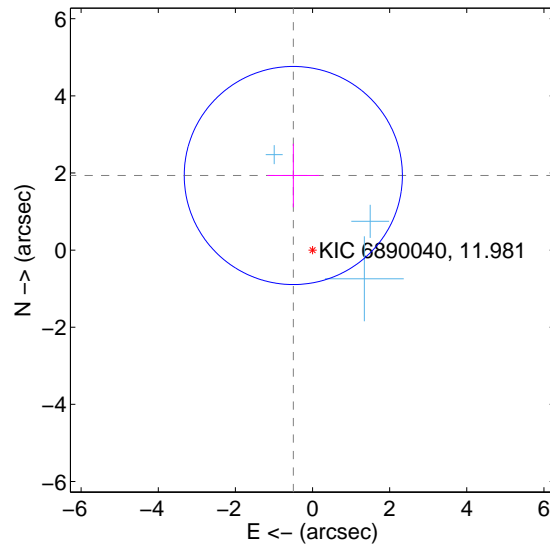
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.678 ± 0.752	2.23	0.508 ± 0.814	1.600 ± 0.745
PRF-fit source offset from KIC position	1.998 ± 0.943	2.12	0.498 ± 0.671	1.934 ± 0.824
photometric centroid source offset	1.90 ± 1.11	1.71	-0.31 ± 1.26	1.87 ± 1.11

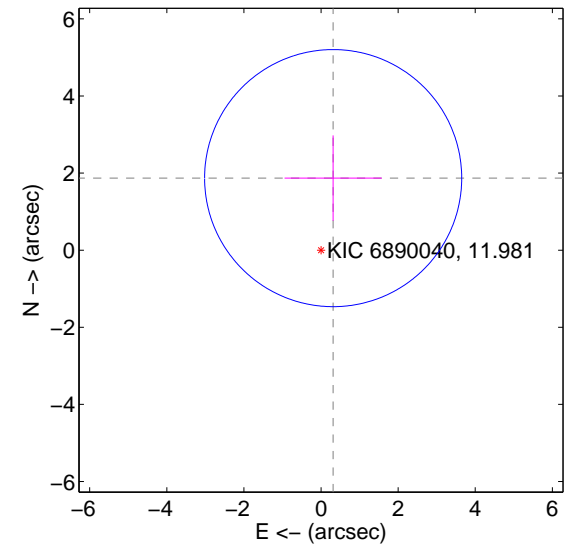
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

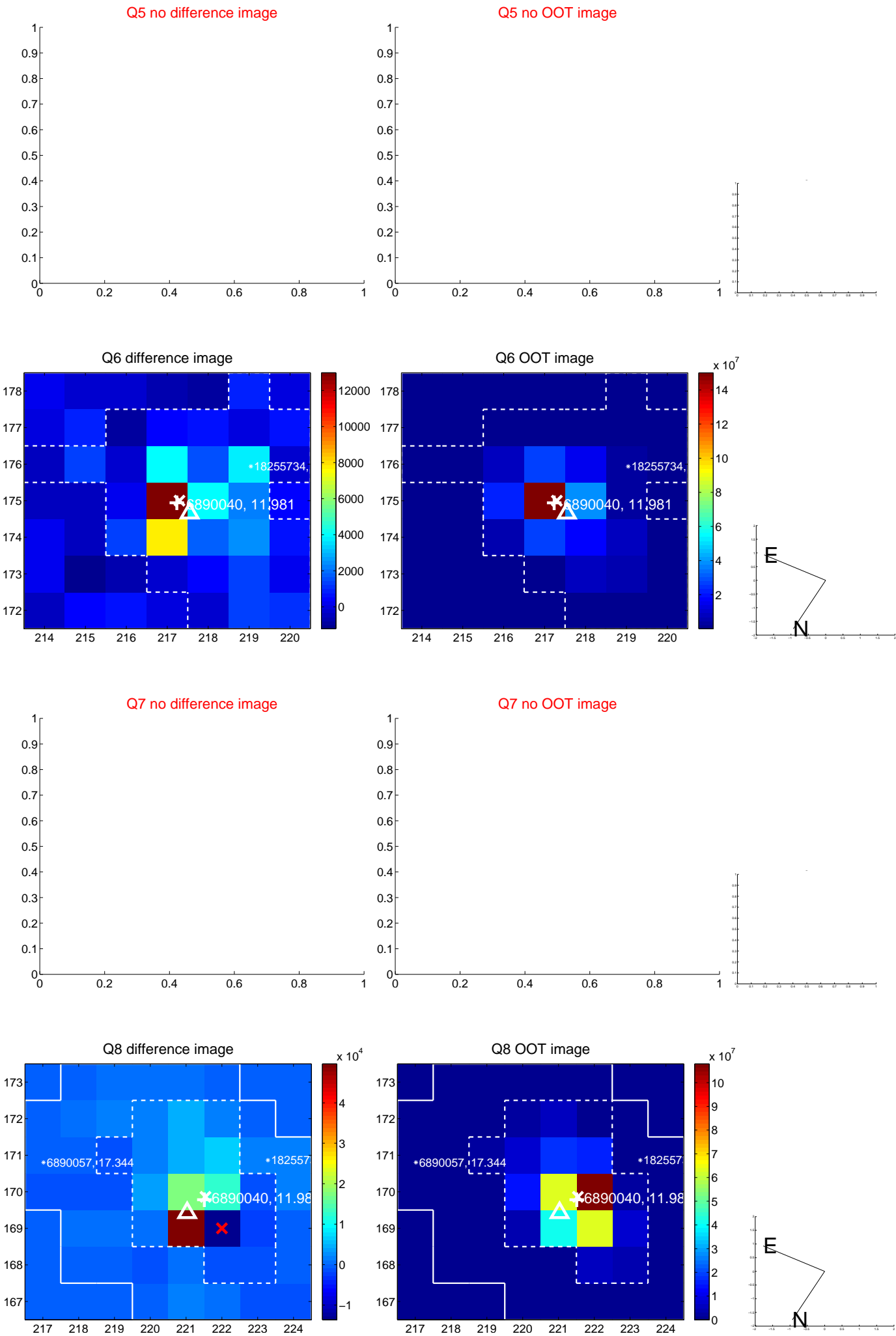


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



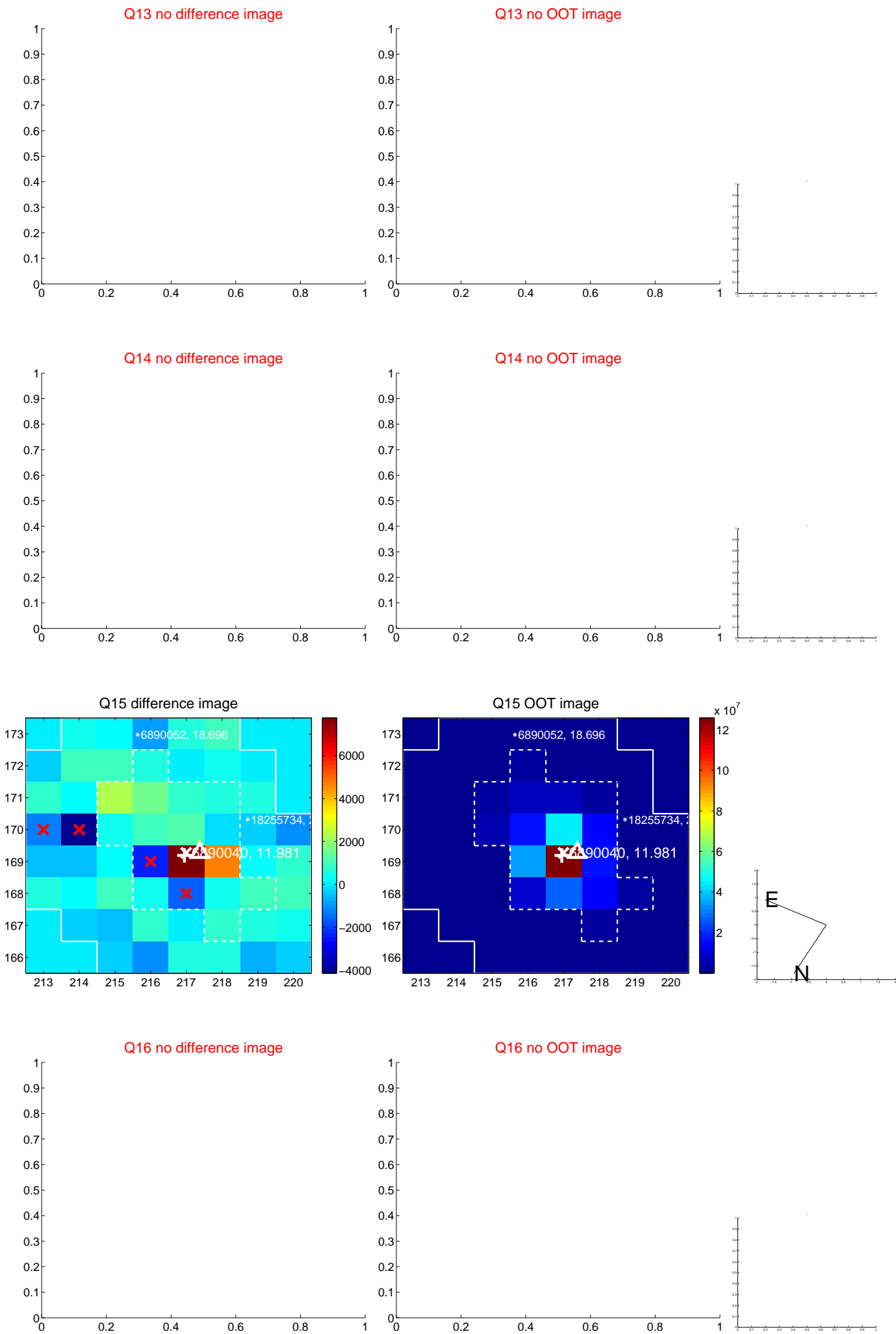
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



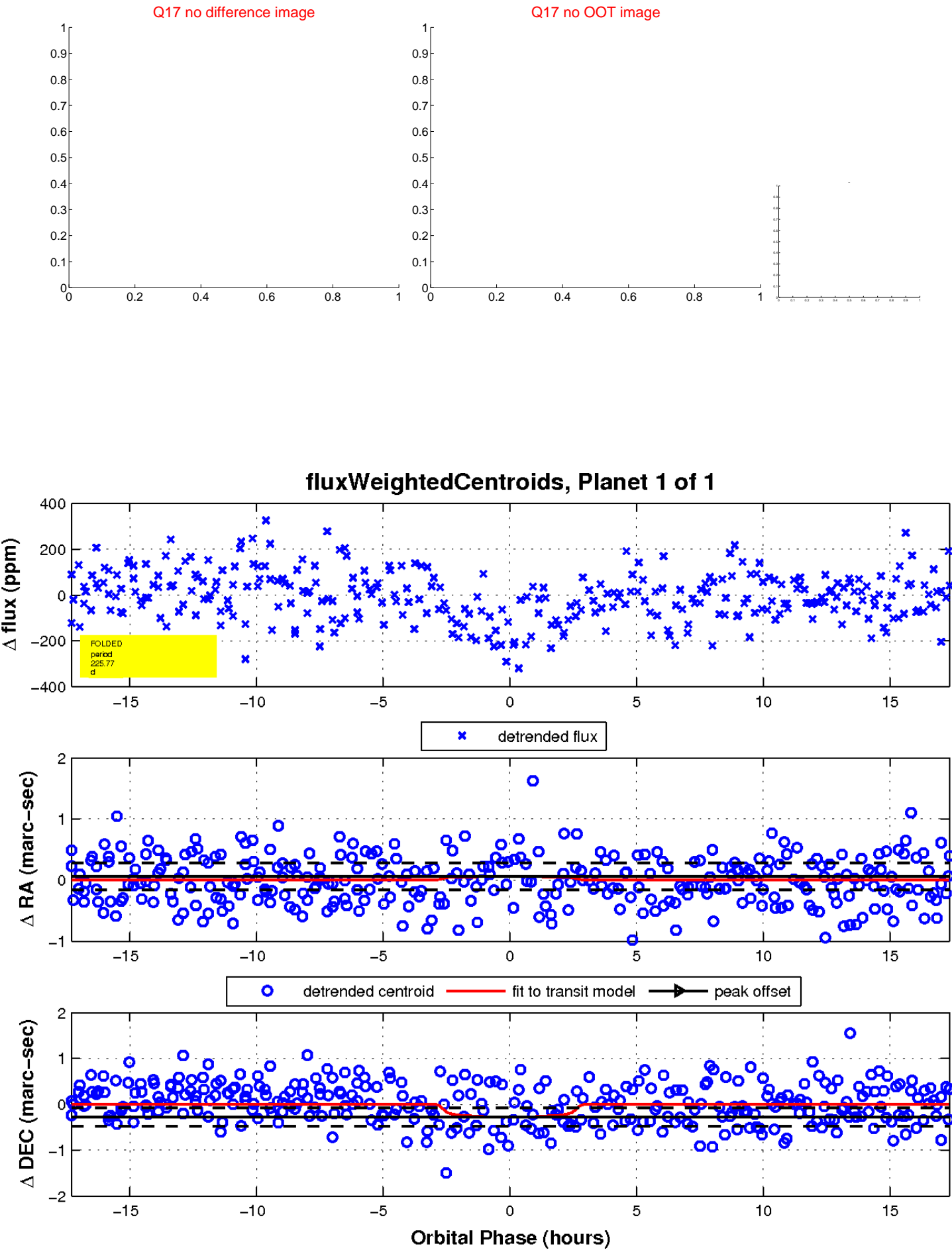
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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Declination